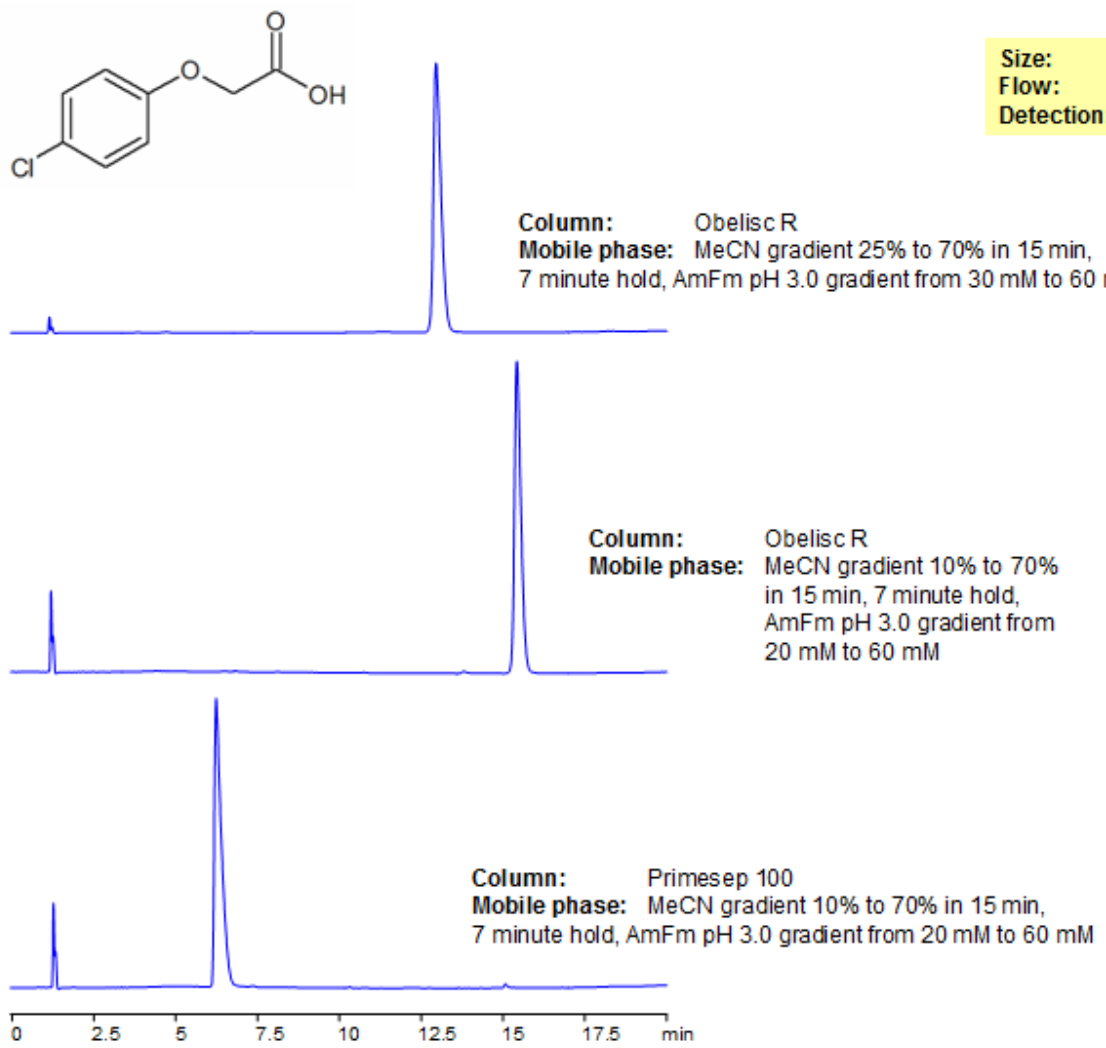
4-CPA Analysis on Obelisc and Primesep Mixed-Mode Columns

https://sielc.com/Application-4-CPA-Analysis-on-Obelisc-and-Primesep-Mixed-Mode-Columns

Chromatogram



Description

4-CPA (4-Chlorophenoxyacetic acid) is a synthetic pesticide that mimics plant hormones called auxins. A single residue method for the EURL (European Union Reference Laboratory) was developed for 4-CPA and other acidic compounds using QuEChERS (Quick, Easy, Cheap, Effective, Rugged, and Safe) methodology. Retention of 4-CPA was controlled on both Obelisc R and a 3 micron Primesep 100 column of the same dimension. By using a gradient for the organic and ionic components of the mobile phase, the method is capable of separating dozens of pesticides quickly while remaining LC/MS compatible.

Method Parameters

Mobile Phase	Gradient MeCN – 10-70%, 15 min, 7 min hold
Buffer	Gradient AmAc pH 3.0- 20-60 mM, 15 min, 7 min hold
Flow Rate	0.4 ml/min
Detection	UV, 270 nm

Class of Compounds	Insecticide, Herbicide, Fungicide, Hydrophobic, Ionizable
Analyzing Compounds	4-CPA

HPLC Column Used

Primesep 100, 2.1×150 mm, 5 µm, 100A

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